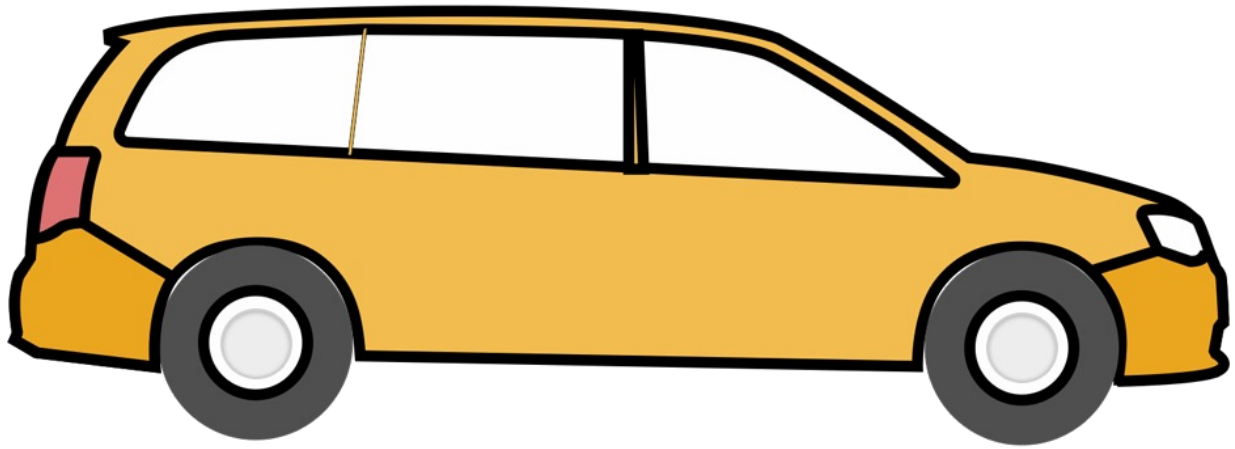
Test Automation Estimation

Estimation is an art not a science

An estimate is not one number: it’s a range or a probability distribution.

How long will it take to reach Bangalore from Chennai?



So, you made assumptions.

Do not assume, rather ask !!

Assumptions Video (Credit: QAQCArena)

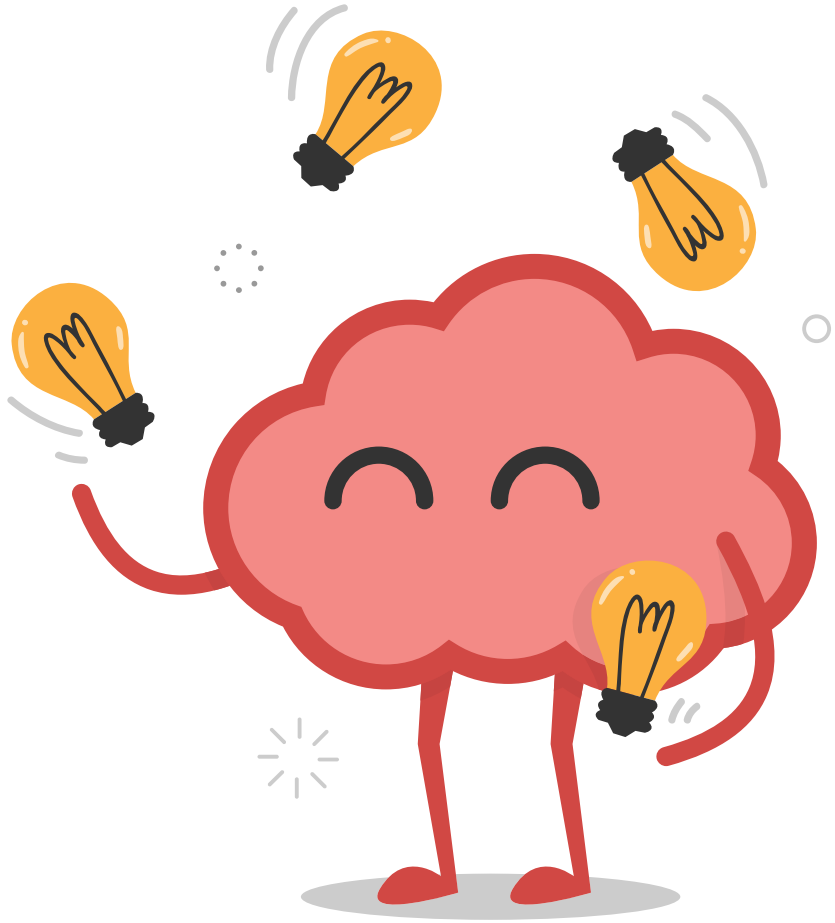
Accidental Automation Engineer !!

The worst estimate happened in my first test automation project. – Deloitte & Touché

Discovery Workshops can bring out the unknowns.

Know the scope through discovery

- Scope clarity
- Can vs Cannot
- Third Party Tools/Frameworks Acceptance
- Expectations



1) Team

1. Skill Index
2. Attitude
3. Learning Curve
4. Expertise in similar Background
5. Availability

2) Tools

Functional Test Automation 01

Performance Testing 02

Test Management 03

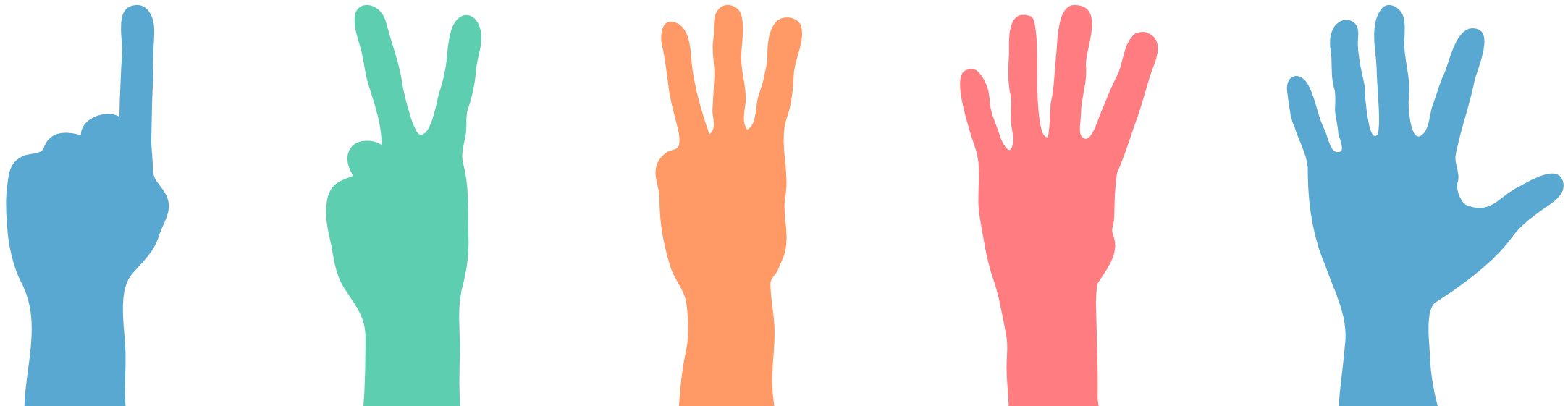
Source Control & Build 04

CI/CD/CT 05

Cloud & Containers 06

Tool Selection can hugely impact your Estimation

1. Need & Purpose
2. Tenure & Features
3. Commits & Support
4. Language & Platform
5. Power of Integration



3) Historical Data

01

Data Availability

03

Data Quality

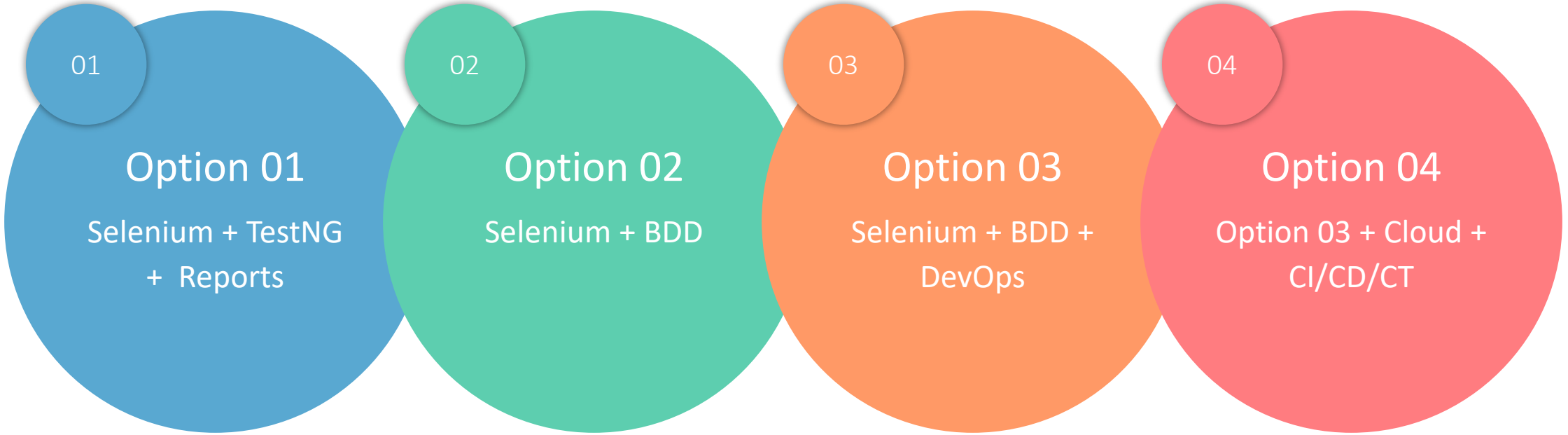
02

Data Size Matters

04

Data Variety

4) Frameworks



5) Accelerators

Locator Auto Identifiers

SelectorsHub, Ruto, Taiko

Code Generators

Automated code generators – Tuna, Elementer

Auto defect loggers

Using API, Plugins and through ML Models

Data & Document Generators

Tools like Yard

6) Know the Noise

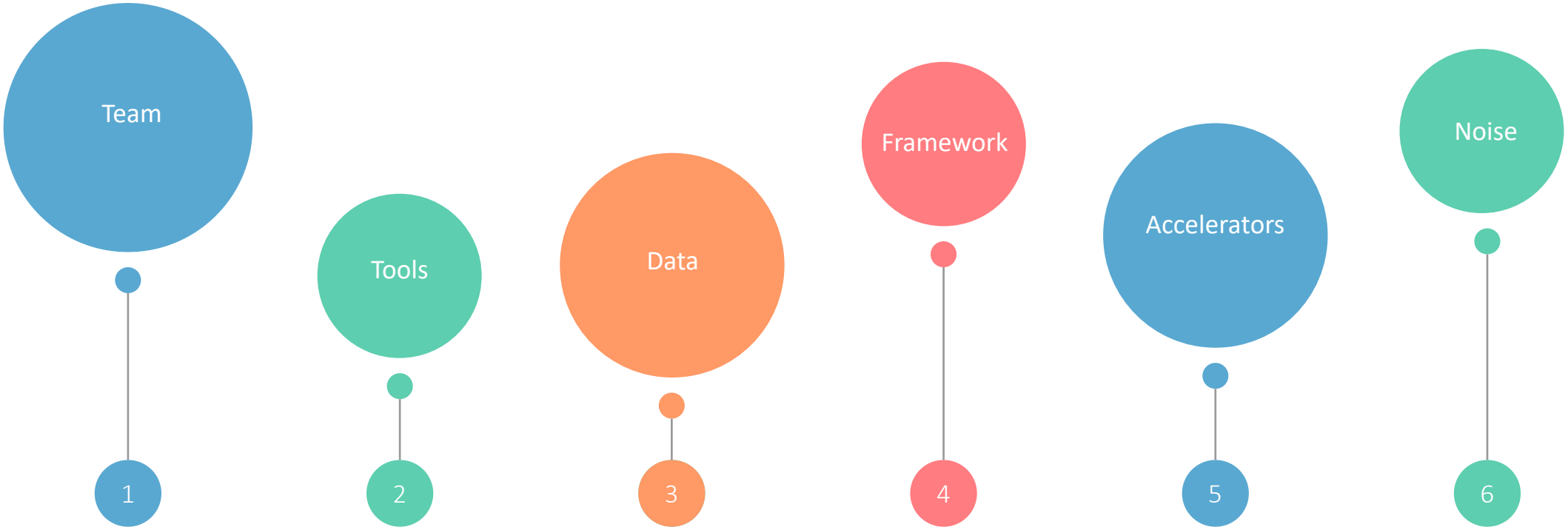
01 Meetings Tenure & Quality

02 Poor or Absence of Documentation

03 Claimed vs Real Experience

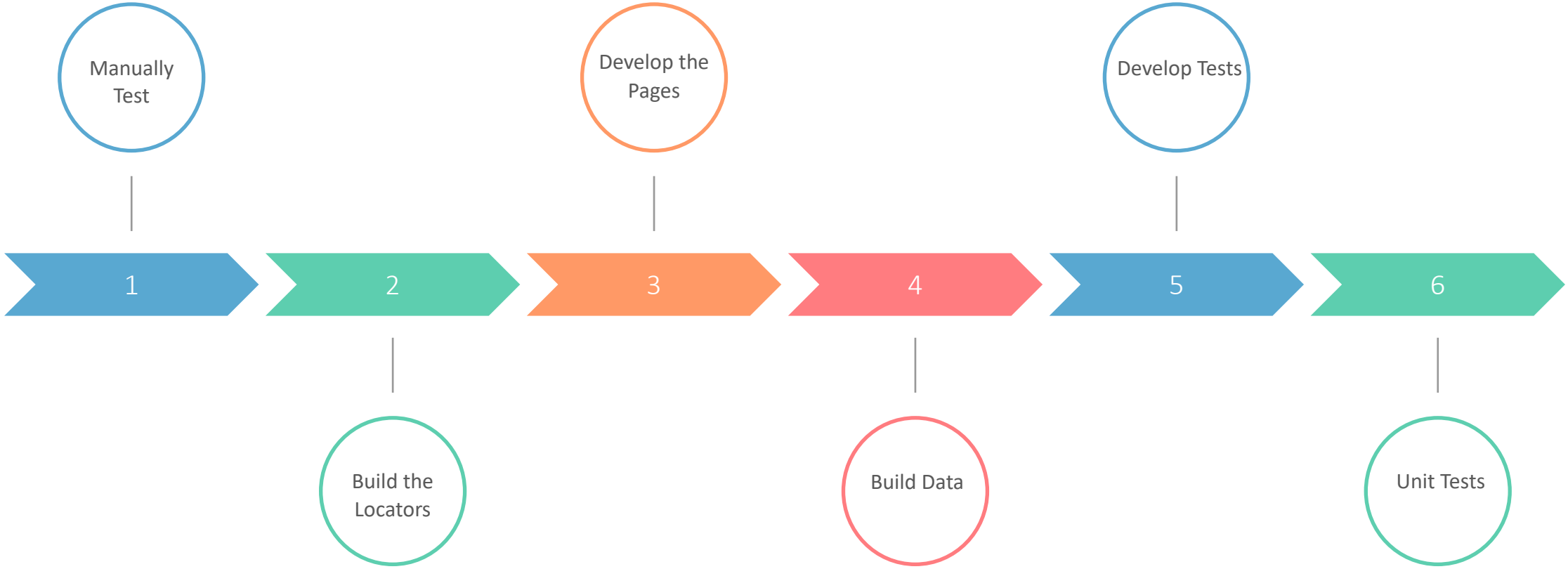
04 Poor Network Connectivity

Convert Parameters to Quantitative Index

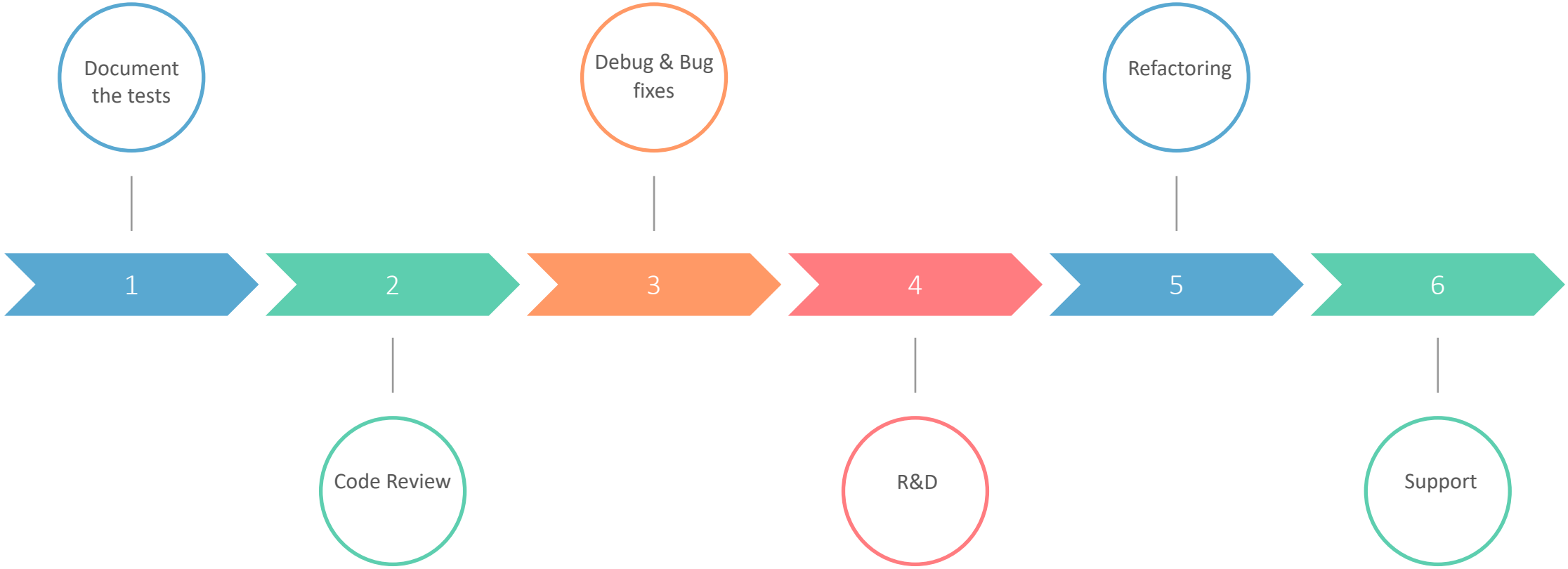


What is next?

Tasks to be performed



These are generally forgotten to be accounted



In Sum, Identify every single task part of the automation activity

Then, Find the effort involved for each Activity

Effort by Test Grouping & PERT Formula

It is okay to have as many test groups as possible.
The larger it is, you will end up in maximum likelihood estimation

Get the best case from the expert doers,
may be from COE or practitioners

Get the most likely case from your teams,
who are likely to perform everyday

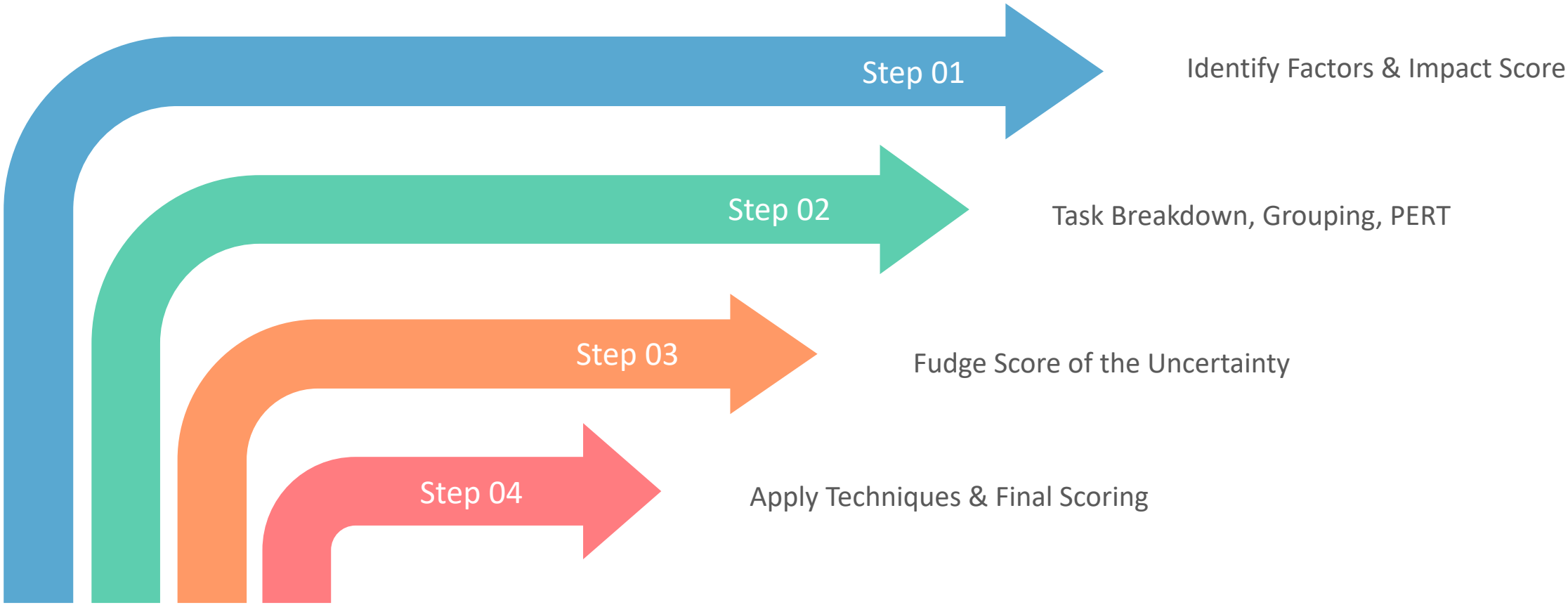
Also, get the worst likely case from your beginners,
who would support in the project

Compute expected case using the PERT formula for every group:
expectedCase = (bestCase + 4 * mostLikelyCase + worstCase) / 6.

Score the Uncertainty

- Scope creep is very common
- Build Assumptions
- Fudge Factor : Accuracy Challenges + Risk Factors

4 Step Process to get you there …



Delivery stress can cause more defects.

Much better to overestimate than to underestimate (linear vs. non-linear cost)

Apply 4 Step Process to get your estimation to the closest proximity

‘Structured’ judgment is much more accurate than ‘intuitive’ judgment.

Take feedbacks from different people

Promise Less, Deliver More !!

Thank you